Differentiating Instruction

What, Why, How

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Strategies for Differentiating Instruction

Differentiation is a process through which teachers enhance learning by matching student characteristics to instruction and assessment. Differentiation allows all students to access the same classroom curriculum by providing entry points, learning tasks, and outcomes that are tailored to students' needs. In a differentiated classroom, variance occurs in the way in which students gain access to the content being taught (Hall, Strangman, & Meyer, 2003).

Teachers can differentiate content, process, and/or product for students (Tomlinson, 1997). Differentiation of content refers to a change in the material being learned by the student. For example, if the classroom objective is for all students to write persuasive paragraphs, some of the students may be learning to use a topic sentence and supporting details, while others may be learning to use outside sources to defend their viewpoint. Differentiation of process refers to the way in which the student accesses material. One student may explore a learning center while another student collects information from the web. Differentiation of product refers to the way in which the student shows what he or she has learned. For example, to demonstrate understanding of the plot of a story, one student may create a skit, while another student writes a book report.

When teachers differentiate, they do so in response to students' readiness, interest, and/or learning profile. Readiness refers to the skill level and background knowledge of the child. Teachers use diagnostic assessments to determine students' readiness. Interest refers to topics that the student may want to explore or that will motivate the student. Teachers can ask students about their outside interests and even include students in the unit-planning process. Finally, the student's learning profile includes learning style (for example, is the student a visual, auditory, tactile, or kinesthetic learner), grouping preferences (for example, does the student work best individually, with a partner, or in a large group), and environmental preferences (for example, does the student need lots of space or a quiet area to work). When a teacher differentiates, all of these factors can be taken into account individually or in combination (Tomlinson, 1997).

The table in this document provides descriptions of ten differentiation strategies, ways in which the strategies are primarily used to differentiate instruction, and guidelines for their use. Teachers should select differentiation strategies based on the curriculum taught and the needs of students in their classrooms.

STRATEGIES FOR DIFFERENTIATION		
Strategy	**Rationale for Use**	**Guidelines for Use**
Compacting- a three step process that assesses what a student knows about material to be studied and what the student needs to master, (2) plans for learning what is not known, and (3) plans for freed-up time to be spent in enriched or accelerated study	• Recognizes large reservoir of knowledge in some learners • Satisfies hunger to learn more about more topics than school often allows • Encourages independence • Eliminates boredom and lethargy resulting from unnecessary drill & practice	• Explain the process and its benefits to students & parents • Pre-assess learners' knowledge and document findings • Allow students much choice in use of time "bought" through previous mastery • Use written plans and timelines for accelerated or enrichment study • Can use group compacting for several students
Independent/Group Projects- process through which student &teacher identify problems or topics of interest to student. Both student(s) & teacher plan a method of investigating the problem or topic & identifying type of product students will develop. This product should address the problem & demonstrate the students ability to apply skills & knowledge to the problem or topic	• Builds on student interest • Satisfies curiosity • Teaches planning and research skills at advanced levels • Encourages independence (and/or interdependence)	• Builds on student interests. Allows student(s) maximum freedom to plan, based on student(s) readiness for freedom. • Teacher provides guidance & structure to supplement student capacity to plan and to ensure high standards of production (use 6 A's to guide project design &implementation: Academic Rigor, Authenticity, Adult Relationships, Applied Learning, Active Exploration, and Assessment Practices) • Use present timelines to zap procrastination • Use process logs to document the process involved throughout the study • Establish criteria for success
Problem-Based Learning- Consists of providing students with ill structured problems that are open-ended & challenging. Students use information and processes in real-world situations to solve the problems. Problem-based learning gives students the opportunity to work on problems in a real life scenario. There are no easy answers and students are required to investigate options, apply knowledge & practice skills.	NOTE: Howard Gardner defines intelligence as the ability to solve problems, handle crises, and produce something of value for ones culture. • Problem-based learning provides the brain with conditions that intrigue and engage • Allows for creativity • Provides learners with the chance to use their skills and capabilities in a variety of ways	Steps in Problem-Solving: • Clarify or identify the problem • Draw on background knowledge and experiences (identify resources) • Begin with what you know (access information) • Plan your approach (generating hypotheses) • Work at your own pace • Use creative solutions

Strategy	Rationale for Use	Guidelines for Use
Interest Centers/Groups- Can provide enrichment for students who demonstrate mastery/competence with required work & can be a vehicle for providing students with meaningful study when required assignments are completed. In addition, all learners enjoy and need the opportunity to work with others. Interest groups can be differentiated by level of complexity and independence required, as well as by student interest to make them accessible & appropriately challenging for all learners.	• Allows student choice • Taps into student interest; motivating • Satisfies curiosity – explores hows & whys • Allows study of topics not in the regular curriculum. • Can allow for study in greater breadth & depth • Can be modified for student readiness	• Build on student interest • Encourage students to help you develop interest-based tasks • Adjust for student readiness • Allow students of like interests to work together • Develop clear (differentiated) criteria for success • For advanced learners, allow long blocks of time for work, change centers less often to allow for depth of study, make certain tasks are challenging.
Tiered Assignments- In a heterogeneous classroom, a teacher uses varied levels of activities to ensure that students explore ideas at a level that builds on a prior knowledge and prompts continued growth. Student groups use varied approaches to exploration of essential ideas.	• Blend assessment & instruction • Allows students to begin learning where they are • Allows for reinforcement or extension of concepts and principles based on student readiness • Avoids work that is overly anxiety-producing or boredom-producing • Promotes success motivating	• Be sure the task is focused on a key concept or generalization essential to the study • Use a variety of resource materials of differing levels of complexity, abstractness, number of steps, concreteness, & independence to ensure appropriate challenge • Be certain there are clear contents for quality & success
Flexible Grouping- students are part of many different groups- and also work alone- based on the match of the task to student readiness, interest, learning style, etc. Sometimes students select work groups; sometimes they are teacher selected. Sometimes student group assignments are purposeful and sometime random.	• Allows both for quick mastery of information/ideas & need for additional exploration by students needing more time for mastery • Allows both collaborative &independent work • Gives students &teachers a voice in work arrangements. • Allows students work with a wide variety of peers • Encourages teachers to "try out" students in a variety of work settings • Keeps students from being "labeled" as advanced or struggling • Keeps students from being cast as those in need of help and those who are helpers	• Ensure that all students have opportunities to work both with students most like themselves in readiness and/or interest, and with students dissimilar from themselves in readiness and/or interest • Teacher assigns work groups when task is designed to match individual readiness/interest based on pre-assessment or teacher knowledge • Teacher assigns work groups when desirable to ensure that students work with variety of peers • Students select groups when task is well –suited for peer selection • Alternative purposeful assignment to groups with teacher/student selection • Ensure that all student learn work cooperatively, collaborative, and independently

Strategy	Rationale for Use	Guidelines for Use
Learning Centers (note: tend to be used more often at k-8 level, but can also be used effectively at high school level) Learning centers can be "stations" or collections of materials learners use to explore topics or practical skills. Teachers can allow for student choice and can adjust learning center tasks to readiness levels or learning styles of different students.	• Allows for students choice and possibility of matching tasks with learners readiness or learning style • Encourages continuous development of student skills • Enables students to work at appropriate pace • Allows teacher to break class into practice and direct instruction groups at a given time	• Match tasks to learner readiness, interest, learning style • Avoid having all learners do all work at all centers • Teach students to record their own progress at centers • Monitor what students do and what they understand at centers • Have clear directions and clear criteria for success at centers
Varying Questions In class discussions and on tests, teachers vary the sorts of questions posed to learners based on their readiness, interest, and learning styles	• All students need to be accountable for information and thinking at high levels • Some students will be challenged by a more basic thought question while others will be challenged by a more basic thought question while others will be challenged by a question that requires speed response, large leaps of insight • Teachers can "try out" students with varied sorts of questions as one means of assessing students progress and readiness • Varying questions appropriately helps nurture motivation through success • In oral settings all students can hear and learn from wide range of responses	• Target some question to particular students and "open the floor" to others • Use open-ended questions when possible • Use wait time before taking answers • When appropriate, give students a chance to talk with thinking partners before giving answers • Encourage students to build on one another's answers. Require students to explain and defend their answers. • Adjust the complexity, abstractness, degree of "mental" leap required, time constraints, connections required between topics, etc.

Strategy	Rationale for Use	Guidelines for Use
Mentorships/Apprenticeships Students work with a resource teacher, media specialist, parent volunteer, older students (academic mentor/buddy), or industry partner/community member who can guide their growth in particular area. Some mentorships may focus on design and execution of advance projects, some on explanation of particular projects, some of exploration of particular work/ community settings, some an effective development, and some on combination of goals	• Mentorships extend learning beyond the classroom • Memberships make learning a partnership • Mentorhips can help students expand awareness of future options and how to attain them • Mentorships have a low teacher-to-learner ratio (often one-to-one)	• Match the mentor with the student's needs (interests, culture, gender) • Be clear in your own mind and specific about the goals of the collaboration • Make sure rules of mentor, student, teacher and parent are written and agreed upon • Provide appropriate preparation and instruction for mentors, including key information about the student • Monitor the progress of the mentorship regularly and help problem solve if snags occur • Connect what is learned in the mentorship to what goes on in class whenever feasible
Contracts Contracts take a number of forms that begin with an agreement between student and teacher. The teacher grants some freedom and choices about how a student will complete tasks and the student agrees to use the freedom appropriately in designing and completing work according to a specifications. NOTE: Contracts have the potential for students to develop "flow", the state in which they are totally engaged in challenging and motivating task that matches their skills and preferences.	• Can blend skill-and-content-based learning matched to student's need • Eliminates unnecessary skill practice for students. • Allows students to work at appropriate pace • Helps students learn planning and decision-making skills important for independence as learners • Allows teachers time to work with individuals and small groups • Can encourage extended study on topics of interests • Can faster research, critical and creative thinking, application of skills, and integrated learning	• Blend both skill-and content learning in the contract • Match skills to learner readiness • Match content to readiness, interest , and learning style of student • Allow student choice, especially in content-based portions of the contract • Establish clear and challenging standards for success from the outset • Provide rules for the contract in writing. • When possible, focus the contract on concepts, themes, or problems, and integrate appropriate skills into required projects or products • Vary levels of student independence and time span of the contract to match student readiness.

A teacher can differentiate by . . .

Content	Process	Products
Content consists of facts, concepts, generalizations or principles, attitudes, and skills related to the subject, as well as materials that represent those elements. Content includes both what the teacher plans for students to learn and how the student gains access to the desired knowledge, understanding, and skills. In many instances in a differentiated classroom, essential facts, material to be understood, and skills remain constant for all learners. (Exceptions might be, for varying spelling lists when some students in a class spell at a 2nd grade level while others test our at an 8th grade level, or having some students practice multiplying by two a little longer, while some others are ready to multiply by seven.) What is most likely to change in a differentiated classroom is how students gain access to core learning. Some of the ways a teacher might differentiate access to content include • Using math manipulatives with some, but not all, learners to help students understand a new idea. • Using texts or novels at more than one reading level. • Presenting information through both whole-to-part and part- to-whole approaches. • Using a variety of reading-buddy arrangements to support and challenge students working with text materials. • Reteaching students who need another demonstration, or exempting students who already demonstrate mastery from reading a chapter or from sitting through a reteaching session. • Using texts, computer programs, tape recorders, and videos a is a way of conveying key concepts to varied learners.	*Process* is how the learner comes to make sense of, understand, and "own" the key facts, concepts, generalizations, and skills of the subject. A familiar synonym for process is *activity.* An effective activity or task generally involves students in using an essential skill to come to understand an essential idea, and is clearly focused on a learning goal. A teacher can differentiate an activity or process by, for example, providing varied options at differing levels of difficulty or based on differing student interests. He can offer different amounts of teacher and student support for a task. A teacher can give students choices about how they express what they learn during a research exercise—providing options, for example, of creating a political cartoon, writing a letter to the editor, or making a diagram as a way of expressing what they understand about relations between the British and colonists at the onset of the American Revolution.	We use the term *products* to refer to the terms a student can use to demonstrate what he or she has come to know, understand, and be able to do as the result of an extended period of study. A product can be, for example, a portfolio of student work; an exhibition of solutions to real-world problems that draw on knowledge, understanding, and skill achieved over the course of a semester; an end-of-unit project; or a complex and challenging paper-and-pencil test. A good product causes students to rethink what they have learned, apply what they can do, extend their understanding and skill, and become involved in critical and creative thinking. Among the ways to differentiate, products are to: • Allow students to help design products around essential learning goals. • Encourage students to express what they have learned in varied ways. • Allow for varied working arrangements (for example, working alone or as a part of a team to complete the product). • Provide or encourage use of varied types of resources in preparing products. • Provide product assignments at varying degrees of difficulty to match student readiness. • Use a wide variety of kinds of assessments. • Work with students to develop rubrics of quality that allow for demonstration of both whole-class and individual goals.

GLOSSARY FOR DIFFERENTIATION

Source: http://www.manteno.k12.il.us/curriculumdiff/glossary.htm

Adjusting Questions - Teachers can use the level of thinking and the verbs that match those levels to advance the thinking of student response.
Anchor Activities - Students are expected to understand and know how to complete such activities with no teacher participation so that teacher can work with small groups or individuals. Teachers often spend time early in the school year describing such activities for independence throughout the year. An example of an anchor activity would be using a geoboard and following directions on an activity card.
Choice Activities - Many teachers build choice activities into their week to empower students. Students may be given product choices to demonstrate their learning process, choices to acquire information, or content choices where they determine a topic of study.
Creative Thinking- Creative thinking includes fluency, flexibility, originality, and elaboration.
Critical Thinking - Critical thinking comes in various forms such as: logical reasoning, developing inferences, using inductive and deductive reasoning, posing questions, developing solutions, summarizing conclusions and evaluation results.
Curriculum Compacting - This is the process of compressing the required curriculum into a shorter time period so students who master the basic content faster than others can use the time to do alternative activities. When paired with pre-assessment, it allows the teacher to find out what students already know and not re-teach it to them; find out what students don't know, and make sure they learn it ; and to use the time that is saved for interesting, creative, and challenging activities.
Cluster Grouping - A group of identified gifted students are placed in the classroom of a teacher who has received training in curriculum differentiation.
Differentiation - The process of adapting the curriculum according to the ability level of the student is called Differentiation. It is specifically geared to content, process, or product. Any changes in these areas constitute some type of adaptation or differentiation.
Flexible Grouping - Students are put in groups that do not remain the same and the composition of the group is determined by interest, skill, learning style, compacting.
Graphic Organizers - A visual representation of organizing thinking and ideas such as a Venn diagram or a word web. Useful for all students and particularly for those who organize visually.
High Level Questioning - Classroom teachers ask specific questions which will train students to think on a higher level than basic knowledge or comprehension.
Interest Centers - Areas in a classroom set up with learning experiences directed to a specific interest.
Interest Groups - A learning group composed of those interested in a specific interest of learning.
Independent Study - Student chooses a topic of interest that h/she is curious about and wants to discover more. Their research is guided by questions developed by the student with input from the classroom or differentiation teacher. Research is culminated by a product that is shared with class.
Interest centers - Areas set up in the classroom with learning activities directed at a specific interest
Jigsaw - Individual students or groups of students are asked to study one component of learning while other students or groups study another component. Sharing information gathered puts the pieces together and the students are required to learn from each other. Jigsaw can also have students create different components of an end product.
Literature Circles - Flexible grouping of students who engage in different studies of a piece of literature. Groups can be heterogeneous or homogeneous.
Multiple Intelligences Options - Students select activities or are assigned an activity that is designed for learning a specific area of content through their strong intelligence (verbal-linguistic, interpersonal, musical, etc.).
Open-ended Questions- Open ended questions have multiple answers or lead to other questions. These types of questions require a higher level of thinking rather that a single answer question.

Pre-Assessment - Pre-assessment determines what a student knows about a given topic or content area. It may occur through the use of observation, conversation, interviews, or written work. Teachers use pre-assessment to determine the entry point for instruction.
Product Choices - After learning experiences are completed using the same content or process, the student may have a choice of products to show what has been learned. This differentiation creates possibilities for students who excel in different one modality over another (verbal vs. visual).
Skills Mini-Lesson - A short, specific lesson with students who are ready to learn or practice a skill that is needed by all those in the group.
Stations - Areas in a classroom set up with learning experiences that are steps in a progression of learning an area of content or a skill. Beginning and ending points for students can vary for differentiation.
Think-Pair-Share - Students are working in pairs, asked to think about a question(s) for a specific amount of time, then asked to share their answers with each other.
Think-Tac-Toe - A choice board for students to complete learning experiences.
Tiered Lesson/Assignment/Product - The content is the same but the process and/or the products are varied according to level of skill attained.
Varied Rubrics - statements that describe levels of student response to an assignment or a product; the stated levels of response begin at the minimum and continue to an exceptional response. Can be used to determine grades or teacher assessment of student work. When rubrics are varied, an A response for one student might look different than an A response for another student.

WHAT DOES DIFFERENTIATED INSTRUCTION LOOK LIKE?

Differentiated Instruction is . . .	Differentiated Instruction is not . . .
1. Assessing students before a unit of instruction to determine what they already know	1. All students in the class completing the same work for a unit/chapter
2. Adjustment of the **core** curriculum by content (below to above grade level), process (concrete to abstract), and product (simple to complex)	2 Limiting how and what is taught by teaching to the average student
3. Providing assignments tailored for students of different levels of achievement	3. Assigning more work at the same level to high achieving students
4. Having high expectations for **ALL** students	4. Focusing on student weaknesses and ignoring student strengths
5. Educational experiences which extend, replace, or supplement standard curriculum	5. Activities that **all** students will be able to do
6. Structuring class assignments so they require high levels of critical thinking and allow for a range of responses	6. Giving the same kind of problems or questions and expecting more
7. Students participating in respectful work	7. Creating more work-extra credit, do when done
8. Students and teachers collaborating in learning	8. Using higher standards when grading
9. Putting students in situations where they don't know the answer- often	9. Providing free-time challenge activities
10. Differing the pace of instruction	10. Using capable students as tutors
11. A blend of whole class, group, and independent learning	11. Using individualized instruction

Managing the Differentiated Classroom

1. Have a strong rationale for differentiating instruction based on student readiness, interest, and learning profile.
2. Begin differentiating at a pace that is comfortable for you.
3. Time differentiated activities to support student success.
4. Use "anchor activities" to free you up to focus your attention on your students.
5. Create and deliver instructions carefully.
6. Assign students into groups or seating areas smoothly.
7. Have a "home base" for students.
8. Be sure students have a plan for getting help when you're busy with another student or group.
9. Minimize noise.
10. Make a plan for students to turn in work.
11. Teach students to rearrange the furniture.
12. Minimize "stray" movement.
13. Promote on-task behavior.
14. Have a plan for "quick finishers."
15. Make a plan for "calling a halt."
16. Give your students as much responsibility for their learning as possible.
17. Engage your students in talking about classroom procedures and group processes.

Source: *How to Differentiate Instruction in Mixed-Ability Classrooms* 2nd Edition by Carol Ann Tomlinson

Low-Prep and High-Prep Differentiation

Low-Prep Differentiation

- Choice of books
- Homework options
- Use of reading buddies
- Varied journal prompts
- Orbitals
- Varied pacing with anchor options
- Student-teacher goal setting
- Work alone/work together
- Whole-to-part and part to whole explanations
- Flexible seating
- Varied computer programs
- Design-A-Day
- Varied supplementary materials
- Options for varied modes of expression
- Varying scaffolding on same organizer
- Let's Make a Deal projects
- Computer mentors
- Think-Pair-Share by readiness, interest, learning profile
- Use of collaboration, independence, and cooperation
- Open-ended activities
- Mini-workshops to reteach or extend skills
- Jigsaw
- Negotiated Criteria
- Explorations by interest
- Games to practice mastery of information and skill
- Multiple levels of questions
- Flexible reading formats

High Prep-Differentiation

- Tiered activities and labs
- Tiered products
- Independent studies
- Multiple texts
- Alternative assessments
- Learning contracts
- 4-MAT
- Multiple intelligence options
- Compacting
- Spelling by readiness
- Entry Points
- Varying organizers
- Lectures coupled with graphic organizers
- Interest groups
- Tiered centers
- Interest centers
- Personal agendas
- Literature Circles
- Stations
- Complex instruction
- Group investigation
- Tape-recorded materials
- Teams, Games, and Tournaments
- Think-Tac-Toe
- Simulations
- Problem-Based Learning
- Graduated rubrics
- Student-centered writing formats

Tomlinson, *How to Differentiate in Mixed-Ability Classrooms*, 34.

Product Possibilities

Design a web page	Design political cartoons	Compile a newspaper
Develop a solution to a community problem	Formulate & defend a theory	Develop an exhibit
Create a public service announcement	Conduct a training session	Conduct an ethnography
Write a book	Design & teach a class	Write a biography
Design a game	Do a demonstration	Present a photo-essay
Generate & circulate a petition	Present a news report	Hold a press conference
Write a series of letters	Write a new law & plan for its passage	Develop & use a questionnaire
Present a mime	Make learning centers	Conduct a debate
Design & create a needlework	Create authentic recipes	Make a video documentary
Lead a symposium	Choreograph dances	Create a series of illustrations
Build a planetarium	Present a mock trial	Write poems
Conduct a series of interviews	Make a plan	Develop tools
Develop a collection	Compile & annotate a set of Internet resources	Design or create musical instruments
Submit writings to a journal, magazine, or newspaper	Design a new product	Compile a booklet or brochure
Interpret through multimedia	Write a series of songs	Draw a set of blueprints
Design a structure	Create a subject dictionary	Present a radio program
Design & conduct an experiment	Make and carry out a plan	Do a puppet show
Collect & analyze samples	Design a simulation	Create a series of wall hangings
Plan a journey or an odyssey	Write a musical	Go on an archeological dig
Make an etching or a woodcut	Develop a museum exhibit	Design & make costumes
Writer letters to the editor	Be a mentor	Present an interior monologue
	Write or produce a play	Generate charts or diagrams to explain ideas

Carol Ann Tomlinson, How to Differentiate in a Mixed-Ability Classroom, 2nd ed., Alexandria, ASCD, 2001, 89.

Student-Created Products

Verbal

anecdote
audio recording
ballad
book report
campaign speech
characterization
choral reading
comedy act
conference
debate
description
dialog
discussion
documentary
dramatization
explanation
fairy tale/tall tale
interview
jingle
joke
lecture
lesson
limerick
mock interview
monologue
myth
newscast
nursery rhyme
oral report
panel discussion
patent
pen pal
petition
plan
play
poem
prediction
profile
radio show
radio commercial
rap recorded dialogue
rhyme
riddle
role-play
satire
science fiction
scroll
short story
skit
slogan song
speech
story telling
survey

Written

advertisement
autobiography
book report
booklet
brochure
business letter
characterization
classified ad
comic book
comparison
computer prog.
couplet
creative writing
critique
database
description
film
dialog
dictionary
editorial
essay
fairy tale/tall tale
field manual
free verse
friendly letter
glossary
guidebook
handbook
handout
interview script
job description
joke book
jot list
journal article
label
law
lesson plan
letter to editor
limerick
list
log
lyrics
magazine
magazine article
manual
metaphor
myth
new story ending
newsletter
newspaper
newspaper article
notes
novel
oath
outline
pamphlet
parody
questions
questionnaire
radio script
rating scale
rationale
recipe
reference
report
research paper
review
rewritten ending
speech
story
story problems
survey
telegram
TV script
term paper
test
travel log
vocabulary list
yearbook

Visual

advertisement
CD cover
anagram
animation
annotated biblio.
area graph
artifact collection
award
banner
bar graph
blueprint
book jacket
booklet
bookmark
brochure
bulletin board
calendar
cardboard relief
cartoon
chart
checklist
collage
collection
comic book
costume
cross-section
crossword puzzle
design
diagram
diorama
display
drawing
filmstrip
flag
flashcard
flip chart
flowchart
game
graphic
greeting card
hieroglyphic
icon
id chart
illustration
layout
map
mask
mobile
mosaic
movie
newscast
outline
painting
pattern
pennant
photo essay
photograph
picture
dictionary
picture story
pie chart
playing card
print
puzzle
scatter graph
scenario
scrap book
scroll
sign
silk screen
slide show
stencil
TV commercial
timeline
transparency
travel ad
travel log
tree chart
video tape
wall hanging
weather map
weaving
web
web page
window shade
word game
word search

Kinesthetic

apparatus
aquarium
artifacts
card game
cardboard relief
ceramics
charade
circuit boards
clothing
collage
collection
dance
demonstration
discovery center
display
dramatization
equipment
etching
experiment
fair
food
furniture
gadget
game
hat
imaginary play
improvisation
instrument
invention
jigsaw puzzle
kite
laboratory
learning center
macramé
mime
mobile
model
origami
parallel play
paper mache
play
prototype
puppet
(finger/hand)
marionette
puppet show
puzzle
quilt
relief rubbing
role play
sand casting
scavenger hunt
service
sewing cards
shadow box
simulation
skit
soap sculpture
stage set
stitchery
terrarium
tie-dye
tool
toy
uniform
vehicle
weaving
wire sculpture

STRATEGIES TO CHECK FOR UNDERSTANDING

STRATEGY	DESCRIPTION
3-2-1/ Fist to Five/ Thumbs Up, Thumbs Down	Students communicate their level of understanding to teacher using their fingers
4-3-2-1 Scoring Scale	A posted scale that can be used either as a quick check with hand or a numerical value for students to self-assess on a written assignment
ABCD Whisper	Students should get in groups of four where one student is A, the next is B, etc. Each student will be asked to reflect on a concept and draw a visual of his/her interpretation. Then they will share their answer with each other in a zigzag pattern within their group.
Circle, Triangle, Square	(Circle) Something that is still going around in your head (Triangle) Something pointed that stood out in your mind (Square) Something that "Squared" or agreed with your thinking.
Clickers	Electronic surveying devices that give instant feedback and data
Decisions, Decisions (Philosophical Chairs)	Given a prompt, class goes to the side that corresponds to their opinion on the topic, side share out reasoning, and students are allowed to change sides after discussion
Entrance/Exit Tickets	Each student will be given a ticket to complete before leaving the room answering: What is the most important thing I learned today? What questions do I still have? These tickets can be given to the teacher when exiting the room or upon entering the next day. The teacher uses this information to guide the instruction.
Every Pupil Response	Each student receives a pink and yellow card. Each color represents a specific response. Students raise the card to provide the correct response to a teacher directed question.
Example/Non-Example 1	Given a concept, students sort or write various examples/non-examples
Example/Non-Example 2	Given examples/non-examples, students determine concept
Fill In Your Thoughts	Written check for understanding strategy where students fill the blank. (Another term for rate of change is ____ or ____.)
Flag It	Students use this strategy to help them remember information that is important to them. They will "flag" their ideas on a sticky note or flag die cut…
Give One, Get One	Cooperative activity where the students write response to a prompt, meet up with another student and share ideas so that each leaves with something to add to their list
Handprint	Draw your handprint. In each finger, write one thing you learned today.
Human Graph	A kinesthetic activity where students in the class physically move to create a histogram, where each student represents a data point rating their view
Interlocking Paper Plates	Two color plates used for students to provide feedback to teacher by sliding the two color sections to show level of understanding

STRATEGIES TO CHECK FOR UNDERSTANDING (CON'T.)

Onion Ring (Inner/Outer Circle)	Students form an inner and outer circle facing a partner. The teacher asks a question and the students are given time to respond to their partner. Next, the inner circle rotates one person to the left. The teacher asks another question and the cycle repeats itself.
Project Study Group	Analyzing incorrect responses in multiple choice questions
Quick Writes	A timed writing in response to a question or prompt (can be used before, during, or after instruction)
Rubric	A scoring guide using subjective assessments that is generally composed of dimensions for judging student performance.
Say Something	Students take turns leading discussions in a cooperative group on sections of a reading or video
Slap It	Students are divided into two teams to identify correct answers to questions given by the teacher. Students use a fly swatter to slap the correct response posted on the wall.
Student Data Notebooks	A tool for students to track their learning: Where am I going? Where am I now? How will I get there?
Take and Pass	Cooperative group activity used to share or collect information from each member of the group; students write a response, then pass to the right, add their response to next paper, continue until they get their paper back, then group debriefs.
Timed Pair Share	Given a prompt, students pair up and share their perspective for a given amount of time, taking turns (A talks, B listens, then B talks, A listens)
Triangular Prism	Students give feedback to teacher by displaying the color that corresponds to their level of understanding
Word Sort	Given a set of vocabulary terms, students sort in to given categories or create their own categories for sorting
Whip Around	Teacher poses a question and students list three items. All students stand. Teacher randomly calls students to share, if their topic is called they sit. Teacher continues til all students are sitting.

Source: *Adapted from* http://daretodifferentiate.wikispaces.com/file/view/strategies.pdf

Using a Model to Create a Range of Tasks

Create questions/activities at each cognitive level based upon a commonly known nursery rhyme or fairy tale. Examples using the Pledge of Allegiance are shown below:

ORIGINAL VERSION

Knowledge/Remember (Recall): Say the Pledge.

Comprehension/Understand (Reproduction): Explain what indivisible, liberty, and justice mean.

Application/Apply (Reasoning, **Using Skills and Concepts)**: Explain the distinctions between allegiance to "the Flag" vs. allegiance to "the republic for which it stands."

Analysis/Analyze (Complex or Strategic Thinking): Discuss the meaning of "and to the Republic for which it stands" in terms of its importance to the pledge.

Synthesis/Create (Extended Thinking or Reasoning): Write a contract between yourself and a friend that includes an allegiance to a symbol that stands for something you both believe in.

Evaluation/Evaluate (Extended Thinking or Reasoning): Describe the purpose of the pledge and assess how well it achieves that purpose. Suggest improvements.

ABCs CHART

Name _____ Topic _____

A-B	**C-D**	**E-F**	**G-H**
I-J	**K-L**	**M-N**	**O-P**
Q-R	**S-T**	**U-V**	**WXYZ**

Suggestions for the classroom:

1. As students first to list individually as many terms associated with the topic as possible in three to five minutes. Model the activity by writing a term or two in the blocks on a transparency, Power Point slide or the board.
2. Direct students to turn to their "shoulder" or "side" partner and combine their lists.
3. Move students into their "home" groups of four or if there are not existing long-term groups, ask two pairs to group together. Ask a recorder for the group to combine their two lists into one.
4. In a Numbered Heads Together strategy, call on all students of the same number to stand and share a word from a particular box. If a group does not have any terms in that box, that group's spokesperson can say, "pass."
5. Ask "Why is this word important?" Do not skip this step, because when students share the significance of a word, they also share their prior knowledge and build prior knowledge for all students before they read their text.
6. When students start to read the assigned text, they should add terms to their charts, making sure that all boldface terms in their text are included. If necessary, students can also write definitions of terms that are difficult for them to remember on the back of the ABC graphic.
7. Use a Summarizing ABCs graphic later with the groups of four to see which group can remember the most terms from their reading and discussions.

Summarizing Model

If I Were In Charge of the World *by Judith Viorst*

Summarize the concepts in your articles by using the structure of the poem as your frame.

If I were in charge of the world

I'd _____ _____,

_____ _____,

_____ _____, and also _____ _____,.

If I were in charge of the world
I'd cancel oatmeal,
Monday mornings,
Allergy shots, and also Sara Steinberg.

If I were in charge of the world

There'd be _____ _____, _____,.

_____ _____, and

_____ _____ _____ _____ _____ _____,

If I were in charge of the world
There'd be brighter nights lights,
Healthier hamsters, and
Basketball baskets forty eight inches

If I were in charge of the world

You wouldn't have _____.

You wouldn't have _____.

You wouldn't have _____.

Or "_____ _____ _____ _____."

You wouldn't even have _____.

If I were in charge of the world
You wouldn't have lonely.
You wouldn't have clean.
You wouldn't have bedtimes.
Or "Don't punch your sister."
You wouldn't even have sisters.

If I were in charge of the world

A _____ _____ _____

_____ _____ and

_____ would be a _____.

All _____ _____ would be _____,

And a person who sometimes _____ to _____,

And sometimes _____ to _____,

Would still be _____ to be

In charge of the world.

If I were in charge of the world
A chocolate sundae with whipped cream and nuts would be a vegetable
All 007 movies would be G,
And a person who sometimes forgot to brush,
And sometimes forgot to flush,
Would still be allowed to be
In charge of the world.

Pyramid Summarizing Activity

Respond to the prompts below to complete the summary. Remember that each line should be slightly longer than the preceding line so the finished summary resembles a pyramid. (A more detailed description of this strategy can be found in Rick Wormeli's book, *Summarizing Strategies in Any Subject.*)

_____
A synonym for the topic

_____
One or two related topics

_____
Three words that best describe the topic

_____
One question it sparks in you

_____
A book title or news headline that would capture the essence of the topic

_____
Tools for using the topic

_____
Arguments for the topic

_____
Effects of the topic

Other possible prompts:

An analogy between the topic and a sport
Three attributes or facts about the topic
Three words that best describe the topic
Causes of the topic
Reasons we study the topic
Ingredients of the topic
Personal opinion on the topic
Demonstration of the topic in action
The larger category from which this topic comes
A formula or sequence associated with te topic
Insight gained from studying the topic
Three moments in the history of the topic
One thing we used to think about the topic that we've discovered to be incorrect
Samples of the topic
People who use the topic
What the topic will be like in 25 years

Resources on Differentiated Instruction

Content Area Websites

Reading

http://www.manatee.k12.fl.us/sites/elementary/palmasola/rcompindex.htm

This website contains free online tutorials for 11 reading strategies, grades 3–5. Students can take on-line assessments and independently complete activities.

http://literacynet.org/cnnsf/archives.html

This CNN website provides reading comprehension practice. Students can have a variety of articles read aloud through Real Player, watch movie clips, and complete activities related to vocabulary, reading comprehension, and sequencing.

http://www.rif.org/readingplanet/

Reading is Fundamental's Reading Planet for Kids. This website allows students to listen to books being read aloud, create their own books to print, review books, write stories with other kids, and play games that reinforce reading skills.

Writing

http://english.unitecnology.ac.nz/writers/about.html

This website allows writers aged 5–18 to publish their writing (essays, stories, poems) online, give and receive feedback, add to stories already in progress, and participate in a writing discussion board. The site also has a "writer's workshop" section that provides how-to instruction for various genres, as well as writing prompts.

http://www.brighteye.com/texthelp.htm

This website advertises products that read text out loud and gives students a word predictor, a homophone locator, a thesaurus, a spell checker, and a dictionary. A free demonstration of the software is available.

Math

http://matti.usu.edu/nlvm/nav/index.html

This website contains the Virtual Library of Interactive Manipulatives for Interactive Mathematics

http://www.arcytech.org/

This website demonstrates mathematical concepts through the use of on-line manipulatives.

http://www.webmath.com

Webmath allows students to get direct, web-based help with math problems.

http://coe.jmu.edu/mathvidsr/

MathVids is an interactive website that assists teachers in effectively teaching students who have difficulty learning math.

Science

http://www.uvm.edu/~jmorris/Sci.html#Virtual

This website from the University of Vermont provides links to many science programs, including virtual field trips and experiences, science museums, lessons and unit plans, videos, and software.

http://pals.sri.com

Performance Assessment Links in Science (PALS) is an on-line, continually updated resource bank of science performance assessment tasks indexed according to the National Science Education Standards (NSES) and other standards frameworks. The tasks include student directions and response forms, administration procedures, scoring rubrics, and examples of student work.

http://school.discovery.com/sciencefaircentral/

The Science Fair Central site provides a complete guide to science fair projects. The website has science projects and ideas that can be used for science fairs, for group projects in the science classroom, or for student independent studies. There are also links to websites and books and a Q&A section to which students can submit questions about their projects.

Social Studies

http://plasma.nationalgeographic.com/mapmachine/

National Geographic's Map Machine, is a website that allows users to search for nearly any place on Earth and view the location at the street level or from a satellite's perspective. There are also printable physical, historical, political, and topographic maps.

http://www.nytimes.com/learning/

The New York Times Learning Network for grades 3–12. Has a "Student Connections" section that allows students to explore, learn about current events, and write to the editor. The site also has connections for teachers.

http://www.historyplace.com/index.html

This website has an online museum of exhibits related to history, including photos and timelines. The website also includes point of view essays, insights and excerpts from notable authors, and a homework help section.

The Access Center, a project of the American Institutes for Research, is funded by the U.S. Department of Education, Office of Special Education Programs Cooperative Agreement #H326K020003

Other Web-based Resources for Differentiation

Below are several links to websites that may assist you as you explore ways to differentiate instruction. From an internet-connected computer, you can press the control key and click your mouse to go directly to the site without typing the URL.

Templates for Differentiated Instruction strategies
http://www.dcmoboces.com/dcmoiss/staffdev/oinit/dile/didocs.htm

Lesson plans, tiered activities and anchor activities (scroll down for secondary level)
http://redclay.schoolnet.com/outreach/rccsd/lessonplans/

Tiered Lessons – Examples of tiered curriculum lessons K-12
http://ideanet.doe.state.in.us/exceptional/gt/tiered_curriculum/welcome.html

Layered Curriculum
http://www.help4teachers.com/samples2.htm

Think Tac Toe Links
http://www.bedfordk12tn.com/tech/TTT/TTT.html

Lesson Plans – Most content areas
http://www.coollessons.org/coolunits.htm

Teachnology – all subjects; nice resources
http://www.teach-nology.com/subjects/

DI Information and Examples; nice PowerPoint for training
http://schools.sd68.bc.ca/quar/Student_Support/Differentiation_Home.htm

Curriculum Units created by Yale-New Haven Teacher Institutes
http://www.cis.yale.edu/ynhti/curriculum/units/

Lesson Plans from Crossing Borders/Breaking Boundaries Summer Institutes; includes lessons for: Computers and Technology; English Literature; ESOL; Language Arts ; Latin; Music and Dance; Science; Social Studies; Theater; and Visual Arts.
http://www.crbs.umd.edu/finearts/lessonplans/middleschool.html

ReadWriteThink – literacy lessons (many that cross content areas)
http://www.readwritethink.org/lessons/index.asp

Google lesson plan list of links; all subjects
http://www.google.com/Top/Reference/Education/K_through_12/Educators/Lesson_Plans/

Video vignettes for math and science (good for building background knowledge)
www.thefutureschannel.com

Family and Consumer Science lesson plans
http://members.tripod.com/~kburge/HomeEc/lessons.html

FACS lessons
http://www.oneonta.edu/library/subject/educationElementary&Secondary.htm#family

FACS/PE/Technology resources
http://www.sldirectory.com/teachf/teach2.html

PE Links
http://www.pelinks4u.org/

PE Lesson Plans
http://www.pecentral.org/lessonideas/searchresults.asp?category=53
http://members.tripod.com/~pazz/lesson.html
http://csmp.ucop.edu/cpehp/resources/resources_1.html#1

Computer Resources
http://www.tcet.unt.edu/START/instruct/lp_tech.htm

http://www.theteacherscorner.net/lesson-plans/technology/index.htm

Music
http://www.cloudnet.com/~edrbsass/edmusic.htm#lessons

http://www.lessonplanspage.com/MusicJH.htm

Lesson Plans from the Kennedy Center; includes 149 lessons for middle school dance, music, theater, and visual arts.
http://artsedge.kennedy-center.org/teach/les.cfm?subjectId=&otherSubjectId=&gradeBandId=2&showDescriptions=true&sortColumn=grade_band_id&x=17&y=15

ARTSEDGE
http://artsedge.kennedy-center.org/artsedge.html
from the Kennedy Center, one of the very best sites. Here are:

- Teach - Lessons, Standards, How To's
- Connect - Articles and Reports, Contacts, Advocacy Essentials
- Explore - Look-Listen-Learn, Arts Days, Meet the Artist, Arts Quotes

Assessment Resources
http://artswork.asu.edu/arts/teachers/assessment/resources.htm

- Web sites with assessment materials

Open-ended assessment in math (over 400)
http://books.heinemann.com/math/construct.cfm